

What is claimed is:

1 1. A method of detecting potential theft, comprising steps of:
2 programmatically comparing data stored in a radio frequency identification ("RFID") tag
3 on merchandise to data written on a sales receipt; and
4 concluding that a potential theft is detected if the comparing step finds that the data stored
5 in the RFID on the merchandise does not match the data written on the sales receipt.

1 2. The method according to Claim 1, wherein the data written on the sales receipt is written
2 in an RFID tag thereof.

1 3. The method according to Claim 1, wherein the data stored in the RFID tag comprises a
2 unique item identifier of the tagged merchandise.

1 4. The method according to Claim 1, wherein the data stored in the RFID tag comprises a
2 stock-keeping unit ("SKU") and a unique item serial number of the tagged merchandise.

1 5. The method according to Claim 1, wherein the data stored in the RFID tag comprises an
2 Electronic Product Code ("EPC") that uniquely identifies the tagged merchandise.

1 6. The method according to Claim 1, wherein:
2 the data written on the sales receipt comprises a first checksum previously computed over
3 selected portions of data stored in RFID tags on merchandise previously presented at a point of

4 sale;

5 the comparing step further comprises the steps of:

6 computing a second checksum over corresponding selected portions of the data
7 stored in the RFID tags for the merchandise; and
8 using the first checksum and the second checksum as the data being compared.

1 7. A method of preparing information usable in theft detection using radio frequency
2 identification ("RFID") technology on a transaction receipt, comprising steps of:

3 reading, for each of one or more items presented for purchase, identifying information
4 previously stored in an RFID tag affixed thereto;

5 computing a first checksum over selected portions of the identifying information that has
6 been read for each item; and

7 storing the first checksum in an RFID tag affixed to a transaction receipt corresponding to
8 the purchase.

1 8. The method according to Claim 7, further comprising the steps of:

2 reading, for each of one or more items possessed by a shopper, identifying information
3 previously stored in an RFID tag affixed thereto;

4 reading, from the RFID tag affixed to the transaction receipt, the first checksum;

5 computing a second checksum over selected portions of the identifying information that
6 has been read for each item possessed by the shopper; and

7 concluding that some of the possessed items were not paid for if the first checksum is not

8 identical to the second checksum.

1 9. The method according to Claim 8, further comprising the step of remembering each item
2 that was in the shopper's possession when the shopper entered an establishment in which a
3 transaction represented by the transaction receipt was conducted, and wherein the step of
4 computing a second checksum and the concluding step do not apply to the remembered items.

1 10. A method of detecting potential theft using radio frequency identification ("RFID")
2 technology on a transaction receipt, comprising steps of:
3 reading, for each of one or more items possessed by a shopper, identifying information
4 previously stored in an RFID tag affixed thereto;
5 reading, from a transaction receipt possessed by the shopper, a first checksum previously
6 computed over selected portions of identifying information read from an RFID tag affixed to each
7 of one or more items presented by the shopper for purchase;
8 computing a second checksum over selected portions of the identifying information that
9 has been read for each item possessed by the shopper; and
10 concluding that some of the possessed items were not paid for if the first checksum is not
11 identical to the second checksum.

1 11. The method according to Claim 10, wherein the selected portions of the identifying
2 information that has been read for each item possessed by the shopper comprises at least a unique
3 item identifier for each item.

1 12. The method according to Claim 10, wherein the first checksum is stored in, and read from,
2 an RFID tag affixed to the transaction receipt.

1 13. The method according to Claim 10, further comprising the step of remembering each item
2 that was in the shopper's possession when the shopper entered an establishment in which a
3 transaction represented by the transaction receipt was conducted, and wherein the step of
4 computing a second checksum and the concluding step do not apply to the remembered items.

1 14. A method of detecting potential theft, comprising steps of:
2 computing a checksum over identifying information for each of one or more presented
3 items, wherein the identifying information is read from a radio frequency identification ("RFID")
4 tag affixed to each of the presented items;
5 storing the computed checksum in an RFID tag affixed to a receipt associated with the
6 presented items;
7 subsequently presenting one or more items and the receipt;
8 determining whether the subsequently-presented items are associated with the receipt,
9 further comprising the steps of:
10 computing a new checksum over corresponding identifying information for each of
11 the one or more subsequently-presented items, wherein the identifying information for each of the
12 subsequently-presented items is read from an RFID tag affixed thereto; and
13 concluding that the subsequently-presented items are not associated with the

receipt, if the checksum is not equal to the new checksum; and
charging a fee for carrying out one or more of the computing, storing, and determining
steps.

15. A system for detecting potential theft, comprising:

means for programmatically comparing data stored in a radio frequency identification
("RFID") tag on merchandise to data written on a sales receipt; and

means for concluding that a potential theft is detected if the means for comparing finds
that the data stored in the RFID on the merchandise does not match the data written on the sales
receipt.

16. The system according to Claim 15, wherein the data written on the sales receipt is written
in an RFID tag thereof.

17. The system according to Claim 15, wherein the data stored in the RFID tag comprises a
unique item identifier of the tagged merchandise.

18. The system according to Claim 15, wherein the data stored in the RFID tag comprises a
stock-keeping unit ("SKU") and a unique item serial number of the tagged merchandise.

19. The system according to Claim 15, wherein the data stored in the RFID tag comprises an
Electronic Product Code ("EPC") that uniquely identifies the tagged merchandise.

1 20. The system according to Claim 15, wherein:

2 the data written on the sales receipt comprises a first checksum previously computed over
3 selected portions of data stored in RFID tags on merchandise previously presented at a point of
4 sale;

5 the means for comparing further comprises:

6 means for computing a second checksum over corresponding selected portions of
7 the data stored in the RFID tags for the merchandise; and

8 means for using the first checksum and the second checksum as the data being
9 compared.

1 21. A system for preparing information usable in theft detection using radio frequency
2 identification ("RFID") technology on a transaction receipt, comprising:

3 means for reading, for each of one or more items presented for purchase, identifying
4 information previously stored in an RFID tag affixed thereto;

5 means for computing a first checksum over selected portions of the identifying information
6 that has been read for each item; and

7 means for storing the first checksum in an RFID tag affixed to a transaction receipt
8 corresponding to the purchase.

1 22. The system according to Claim 21, further comprising:

2 means for reading, for each of one or more items possessed by a shopper, identifying

information previously stored in an RFID tag affixed thereto;

means for reading, from the RFID tag affixed to the transaction receipt, the first checksum;

means for computing a second checksum over selected portions of the identifying information that has been read for each item possessed by the shopper; and

means for concluding that some of the possessed items were not paid for if the first checksum is not identical to the second checksum.

23. The system according to Claim 21, further comprising means for remembering each item that was in the shopper's possession when the shopper entered an establishment in which a transaction represented by the transaction receipt was conducted, and wherein the means for computing a second checksum and the means for concluding do not apply to the remembered items.

24. A system for detecting potential theft using radio frequency identification ("RFID") technology on a transaction receipt, comprising:

means for reading, for each of one or more items possessed by a shopper, identifying information previously stored in an RFID tag affixed thereto;

means for reading, from a transaction receipt possessed by the shopper, a first checksum previously computed over selected portions of identifying information read from an RFID tag affixed to each of one or more items presented by the shopper for purchase;

means for computing a second checksum over selected portions of the identifying

9 information that has been read for each item possessed by the shopper; and

10 means for concluding that some of the possessed items were not paid for if the first

11 checksum is not identical to the second checksum.

1 25. The system according to Claim 24, wherein the selected portions of the identifying

2 information that has been read for each item possessed by the shopper comprises at least a unique

3 item identifier for each item.

1 26. The system according to Claim 24, wherein the first checksum is stored in, and read from,

2 an RFID tag affixed to the transaction receipt.

1 27. The system according to Claim 24, further comprising means for remembering each item

2 that was in the shopper's possession when the shopper entered an establishment in which a

3 transaction represented by the transaction receipt was conducted, and wherein the means for

4 computing a second checksum and the means for concluding do not apply to the remembered

5 items.

1 28. A computer program product for detecting potential theft, the computer program product

2 embodied on one or more computer-readable media and comprising:

3 computer-readable program code means for programmatically comparing data stored in a

4 radio frequency identification ("RFID") tag on merchandise to data written on a sales receipt; and

5 computer-readable program code means for concluding that a potential theft is detected if

the computer-readable program code means for comparing finds that the data stored in the RFID on the merchandise does not match the data written on the sales receipt.

29. The computer program product according to Claim 28, wherein the data written on the sales receipt is written in an RFID tag thereof.

30. The computer program product according to Claim 28, wherein the data stored in the RFID tag comprises a unique item identifier of the tagged merchandise.

31. The computer program product according to Claim 28, wherein the data stored in the RFID tag comprises a stock-keeping unit ("SKU") and a unique item serial number of the tagged merchandise.

32. The computer program product according to Claim 28, wherein the data stored in the RFID tag comprises an Electronic Product Code ("EPC") that uniquely identifies the tagged merchandise.

33. The computer program product according to Claim 28, wherein:
the data written on the sales receipt comprises a first checksum previously computed over selected portions of data stored in RFID tags on merchandise previously presented at a point of sale;
the computer-readable program code means for comparing further comprises:

6 computer-readable program code means for computing a second checksum over
7 corresponding selected portions of the data stored in the RFID tags for the merchandise; and
8 computer-readable program code means for using the first checksum and the
9 second checksum as the data being compared.

1 34. A computer program product for preparing information usable in theft detection using
2 radio frequency identification ("RFID") technology on a transaction receipt, the computer
3 program product embodied on one or more computer-readable media and comprising:

4 computer-readable program code means for reading, for each of one or more items
5 presented for purchase, identifying information previously stored in an RFID tag affixed thereto;

6 computer-readable program code means for computing a first checksum over selected
7 portions of the identifying information that has been read for each item; and

8 computer-readable program code means for storing the first checksum in an RFID tag
9 affixed to a transaction receipt corresponding to the purchase.

1 35. The computer program product according to Claim 34, further comprising:

2 computer-readable program code means for reading, for each of one or more items
3 possessed by a shopper, identifying information previously stored in an RFID tag affixed thereto;

4 computer-readable program code means for reading, from the RFID tag affixed to the
5 transaction receipt, the first checksum;

6 computer-readable program code means for computing a second checksum over selected
7 portions of the identifying information that has been read for each item possessed by the shopper;

8 and

9 computer-readable program code means for concluding that some of the possessed items
10 were not paid for if the first checksum is not identical to the second checksum.

1 36. The computer program product according to Claim 34, further comprising computer-
2 readable program code means for remembering each item that was in the shopper's possession
3 when the shopper entered an establishment in which a transaction represented by the transaction
4 receipt was conducted, and wherein the computer-readable program code means for computing a
5 second checksum and the computer-readable program code means for concluding do not apply to
6 the remembered items.

1 37. A computer program product for detecting potential theft using radio frequency
2 identification ("RFID") technology on a transaction receipt, the computer program product
3 embodied on one or more computer-readable media and comprising:

4 computer-readable program code means for reading, for each of one or more items
5 possessed by a shopper, identifying information previously stored in an RFID tag affixed thereto;

6 computer-readable program code means for reading, from a transaction receipt possessed
7 by the shopper, a first checksum previously computed over selected portions of identifying
8 information read from an RFID tag affixed to each of one or more items presented by the shopper
9 for purchase;

10 computer-readable program code means for computing a second checksum over selected
11 portions of the identifying information that has been read for each item possessed by the shopper;

12 and
13 computer-readable program code means for concluding that some of the possessed items
14 were not paid for if the first checksum is not identical to the second checksum.

1 38. The computer program product according to Claim 37, wherein the selected portions of
2 the identifying information that has been read for each item possessed by the shopper comprises at
3 least a unique item identifier for each item.

1 39. The computer program product according to Claim 37, wherein the first checksum is
2 stored in, and read from, an RFID tag affixed to the transaction receipt.

1 40. The computer program product according to Claim 37, further comprising computer-
2 readable program code means for remembering each item that was in the shopper's possession
3 when the shopper entered an establishment in which a transaction represented by the transaction
4 receipt was conducted, and wherein the computer-readable program code means for computing a
5 second checksum and the computer-readable program code means for concluding do not apply to
6 the remembered items.